

WHAT IS CLAIMED:

1. A fiber optic plug comprising:
  - a fiber optic connector comprising a connector housing and a plug ferrule at least partially disposed within the connector housing and capable of being mounted upon an end portion of at least one optical fiber; and
    - a plug body extending lengthwise between a first end and a second end, the first end opposed from the second end, and having a shroud proximate the first end thereof, the shroud defining a pair of openings on opposite sides thereof, the openings extending lengthwise from at least a medial portion of the shroud to the first end of the plug body,
      - wherein the fiber optic connector is disposed within the plug body such that the plug ferrule is accessible within the shroud via the first end of the plug body.
2. The fiber optic plug according to claim 1, wherein the pair of openings defined by the shroud are aligned with one another.
  3. The fiber optic plug according to claim 2, wherein the lengthwise extending plug body defines a longitudinal axis, and wherein the fiber optic connector is disposed in a fixed position with respect to the plug body relative to rotation about the longitudinal axis such that the openings defined by the shroud are aligned with the plug ferrule.
    4. The fiber optic plug according to claim 3, wherein the plug ferrule defines a plurality of bores extending lengthwise in a reference plane, and wherein the openings defined by the shroud are centered about the reference plane.
      5. The fiber optic plug according to claim 3, wherein the plug ferrule defines a plurality of bores extending lengthwise in a reference plane, and wherein the openings defined by the shroud are bisected by the reference plane.

5        6.        The fiber optic plug according to claim 1, wherein the shroud is  
cylindrical, and wherein the first end of the shroud comprises a pair of arcuate shroud  
portions separated by the openings.

10        7.        The fiber optic plug according to claim 1, wherein the first end of the  
shroud protrudes beyond the plug ferrule.

15        8.        The fiber optic plug according to claim 1, wherein the lengthwise  
extending plug body defines a longitudinal axis, and wherein the plug body further  
comprises:

15        a shaft proximate the shroud; and  
a collar disposed upon the shaft such that travel of the collar in the lengthwise  
direction is limited while permitting rotation of the collar about the longitudinal axis  
relative to the shaft.

20        9.        The fiber optic plug according to claim 8, wherein the shaft comprises a  
frustoconical portion proximate the second end of the plug body and a cylindrical portion  
forming a medial section of the plug body and extending lengthwise proximate the first  
end of the plug body.

25        10.       The fiber optic plug according to claim 9, wherein the shroud has a larger  
diameter than the cylindrical portion of the shaft.

11.       The fiber optic plug according to claim 1, wherein the openings generally  
define an interior angle of less than 90°.

30        12.       The fiber optic plug according to claim 1, further comprising:  
a cap, wherein the cap is capable of being mounted upon the plug body so  
as to cover at least the first end thereof, the cap mounted upon the plug body such that

5 travel of the cap in the lengthwise direction is limited while permitting the cap to rotate about the longitudinal axis relative to the plug body.

13. The fiber optic plug according to claim 1, further comprising:  
a crimp band for connecting the fiber optic connector to a fiber optic cable,  
10 the crimp band configured to minimize relative axial motion of the plug body relative to an outer jacket of the fiber optic cable.

14. The fiber optic plug according to claim 13, wherein the crimp band further comprises a crimp band support configured to prevent an inner support tube from moving longitudinally relative to an outer cable jacket of the optical fiber, wherein the crimp band support engages an inner support tube disposed within an outer cable jacket of the fiber optic cable and wherein the inner support tube surrounds the at least one optical fiber proximate an end of the fiber optic cable.

20 15. The fiber optic plug according to claim 1, wherein the shroud defines a lengthwise extending groove for receiving a corresponding alignment member of a fiber optic receptacle in order to align the fiber optic plug with the fiber optic receptacle.

25 16. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises an MTRJ connector.

17. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises an MTRJ connector.

30 18. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises an SC-DC connector.

19. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises an SC connector.

20. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises an LC connector.

21. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises an MTP connector.

22. The fiber optic plug according to claim 1, wherein the fiber optic connector comprises a Unicam connector.

15 23. A fiber optic plug comprising:  
a fiber optic connector comprising a connector housing and a plug ferrule at least partially disposed within the connector housing and capable of being mounted upon an end portion of at least one optical fiber; and  
a plug body extending lengthwise between a first end and a second end and having  
20 a shroud proximate the first end thereof, wherein the first end is opposed from the second end,  
wherein the fiber optic connector is disposed within the plug body such that the plug ferrule is accessible within the shroud via the first end of the plug body.

25 24. A fiber optic plug and receptacle assembly comprising:  
a fiber optic plug comprising:  
a plug body having a shroud proximate one end thereof, the shroud defining at least one opening; and  
a fiber optic connector disposed within the plug body and  
30 comprising a connector housing and a plug ferrule at least partially disposed within the connector housing; and  
a fiber optic receptacle for mating with the fiber optic plug, the fiber optic receptacle comprising:

5 a receptacle housing defining an internal cavity opening through  
opposed ends; and

an adapter sleeve disposed within the internal cavity defined by the receptacle housing, the adapter sleeve defining a lengthwise extending passage for receiving a portion of the plug ferrule of the fiber optic plug,

10 wherein the shroud and the adapter sleeve are sized such that portions of the  
adapter sleeve are disposed within the at least one opening defined by the shroud once the  
plug ferrule of the fiber optic plug is inserted into the adapter sleeve.

25. The fiber optic plug and receptacle assembly according to claim 24, wherein a fiber optic cable is coupled to the fiber optic receptacle from the plug body through a crimp band, such that tension applied to the fiber optic cable is therefore diverted away from the fiber optic connector.

26. The fiber optic plug and receptacle assembly according to claim 24,  
20 wherein the plug body extends lengthwise between a first end and a second end, the first  
end opposed to the second end, and the openings defined by the shroud extend lengthwise  
from at least a medial portion of the shroud to the first end of the plug body.

27. The fiber optic plug and receptacle assembly according to claim 24,  
25 wherein the at least one opening defined by the shroud is a pair of openings aligned with  
one another.

28. The fiber optic plug and receptacle assembly according to claim 24,  
wherein the lengthwise extending plug body defines a longitudinal axis, and wherein the  
30 plug body further comprises:

a shaft proximate the shroud; and  
a collar for engaging the fiber optic receptacle, the collar disposed upon the shaft such that travel of the collar in the lengthwise direction is limited while permitting rotation of the collar about the longitudinal axis relative to the shaft.

29. A fiber optic plug comprising:

a fiber optic connector comprising a connector housing and a plug ferrule at least partially disposed within the connector housing and capable of being mounted upon an end portion of at least one optical fiber;

10 a crimp band comprising a first portion adapted to operably engage the fiber optic connector and a second portion adapted to engage the fiber optic cable; and

a plug body defining a lengthwise extending passageway proximately centered along a longitudinal axis,

15 wherein the crimp band and the plug body comprise respective engagement members that mate with one another in order to mechanically couple the crimp band and the plug body and to prevent relative rotation therebetween about the longitudinal axis.

30. The fiber optic plug according to claim 29, wherein the crimp band comprises a key, wherein the plug body further defines a keyway opening into the 20 passageway, and wherein the crimp band is at least partially disposed within the passageway defined by the plug body such that the key engages the keyway.

31. The fiber optic plug according to claim 30, wherein the key defined by the crimp band and the keyway defined by the plug body extend in a longitudinal direction to 25 thereby permit relative longitudinal motion between the crimp band and the plug body while preventing relative rotation therebetween about the longitudinal axis.

32. The fiber optic plug according to claim 31, wherein the crimp band is configured to minimize relative axial motion of the plug body relative to an outer jacket 30 of the fiber optic cable.

33. The fiber optic plug according to claim 31, wherein the crimp band extends lengthwise between a first end and a second end, the first end opposed from the second end, wherein the first and second portions of the crimp band are proximate the

5 first and second ends, respectively, wherein the crimp band further comprises a medial portion disposed between the first and second ends, and wherein the key is carried by the medial portion of the crimp band.

34. The fiber optic plug according to claim 31, wherein the crimp band further  
10 comprises an enlarged portion, proximate the second portion of the crimp band, for  
carrying the key of the crimp band.

35. The fiber optic plug according to claim 31, wherein the first and second  
15 portions are capable of being compressed in order to secure the crimp band to the fiber  
optic connector and the fiber optic cable, respectively.

36. The fiber optic plug according to claim 29, wherein the fiber optic  
connector further comprises a spring push attached to the connector housing, and wherein  
the first portion of the crimp band engages the spring push.

20 37. The fiber optic plug according to claim 36, wherein the spring push  
comprises a crimp body, and wherein the first portion of the crimp band engages the  
crimp body of the spring push.

25 38. The fiber optic plug according to claim 29, further comprising an inner  
support tube disposed within a cable jacket of the fiber optic cable and surrounding the at  
least one optical fiber so as to be aligned with the second portion of the crimp band such  
that compression of the second portion of the crimp band crimps the cable jacket between  
the second portion of the crimp band and the inner support tube.

30 39. A fiber optic plug comprising:  
a plug body extending in a lengthwise direction between a first end and a second  
end, the first end opposed from the second end, and defining a longitudinal axis  
therethrough;

5 a fiber optic connector comprising a connector housing and a plug ferrule at least partially disposed within the connector housing and capable of being mounted upon an end portion of at least one optical fiber, wherein the fiber optic connector is disposed within the plug body such that the plug ferrule is accessible via the first end of the plug body; and

10 a cap mounted upon the plug body so as to cover at least the first end thereof, the cap mounted upon the plug body such that travel of the cap in the lengthwise direction is limited while permitting the cap to rotate about the longitudinal axis relative to the plug body.

15 40. The fiber optic plug according to claim 39, wherein the plug body comprises:

a shaft; and

20 a collar disposed upon the shaft such that travel of the collar in the lengthwise direction is limited while permitting rotation of the collar about the longitudinal axis relative to the shaft,

wherein the cap is attached to the collar for movement therewith.

25 41. The fiber optic plug according to claim 40, wherein the shaft includes an externally threaded portion, and wherein the collar includes an internally threaded portion such that the collar is mounted upon the shaft by threadably advancing the collar onto the shaft.

30 42. The fiber optic plug according to claim 41, wherein the plug body further comprises a shroud proximate the first end and adjacent the shaft, wherein the shroud is larger than the shaft such that travel of the collar is limited by the externally threaded portion of the shaft and the shroud.

43. The fiber optic plug according to claim 40, wherein the collar is adapted to engage a fiber optic receptacle once the cap is removed.

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44. The fiber optic plug according to claim 39, wherein the cap defines an opening therethrough.

45. The fiber optic plug according to claim 39, further comprising:  
10 a dust cap mounted upon the plug ferrule so as to cover at least a front face of the plug ferrule.